NOAA Climate Science & Services Monthly Climate Update

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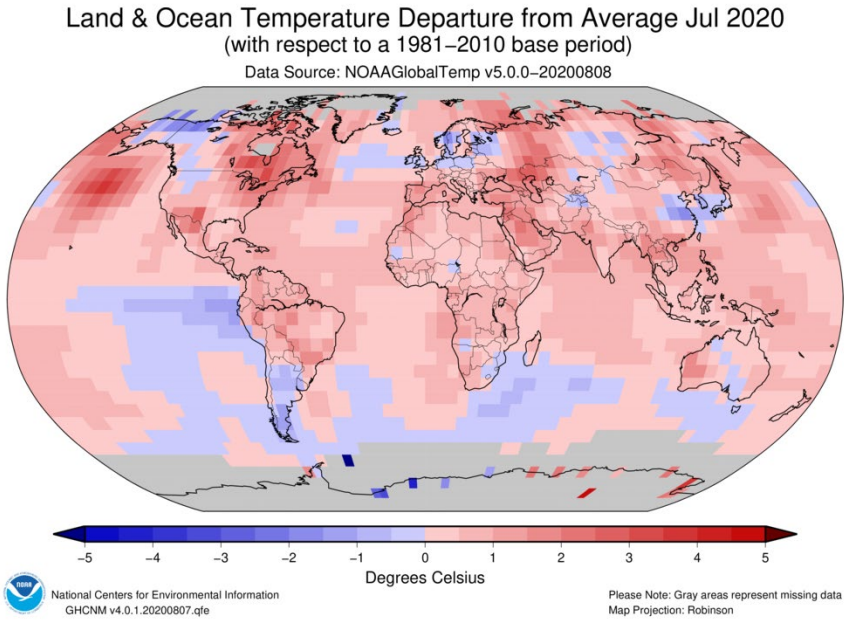
August 2020

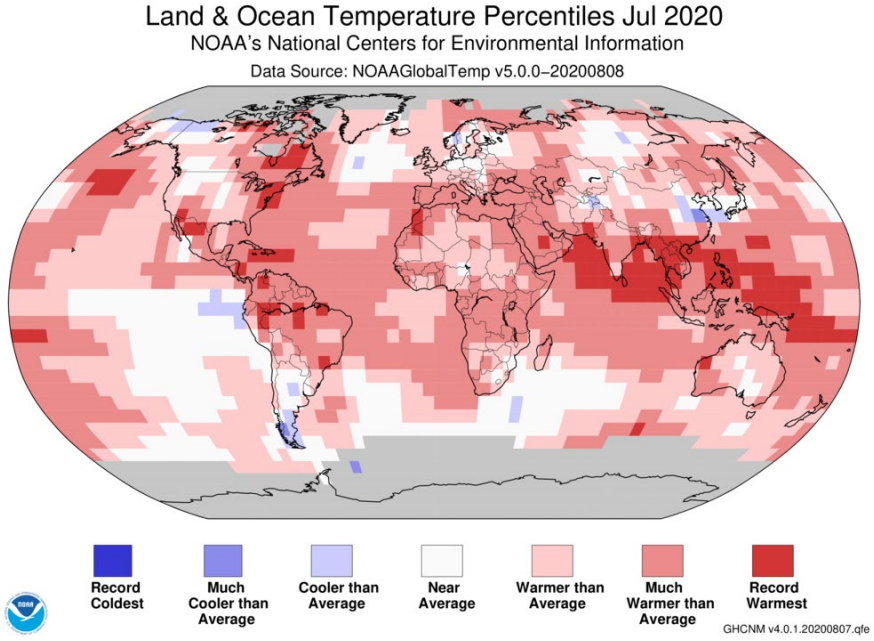
Global Temperature

The global temperature record dates back to 1880 (141 years)



July 2020

- **Global Land & Ocean:** +0.92°C / +1.66°F; tied with 2016 for 2nd warmest, behind 2019
- **Global Land:** +1.23°C / +2.21°F; 2nd warmest, behind 2017
- **Global Ocean:** +0.80°C / +1.44°F; 3rd warmest



- Caribbean region – warmest July
- North America – 2nd warmest July, behind 2012
- Asia – 3rd warmest July

Global Temperature

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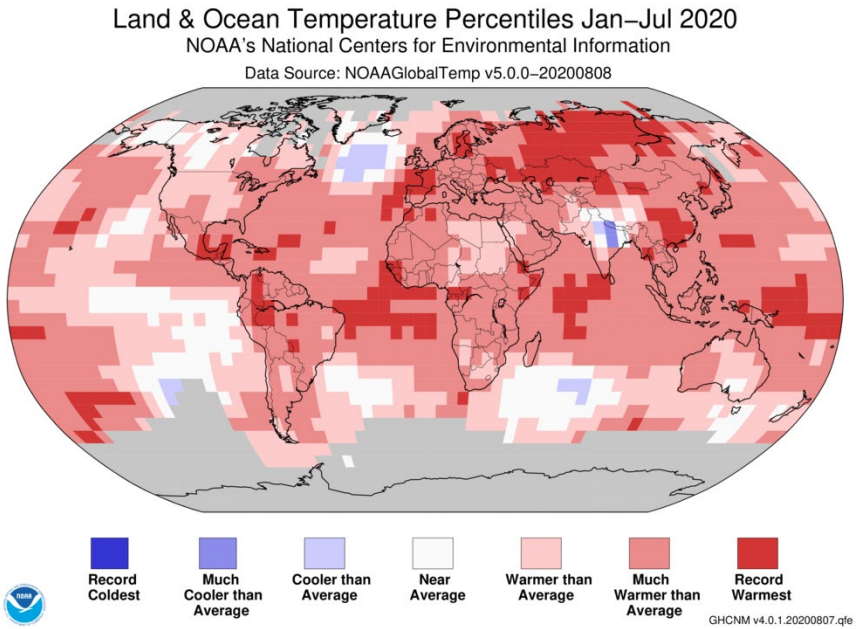
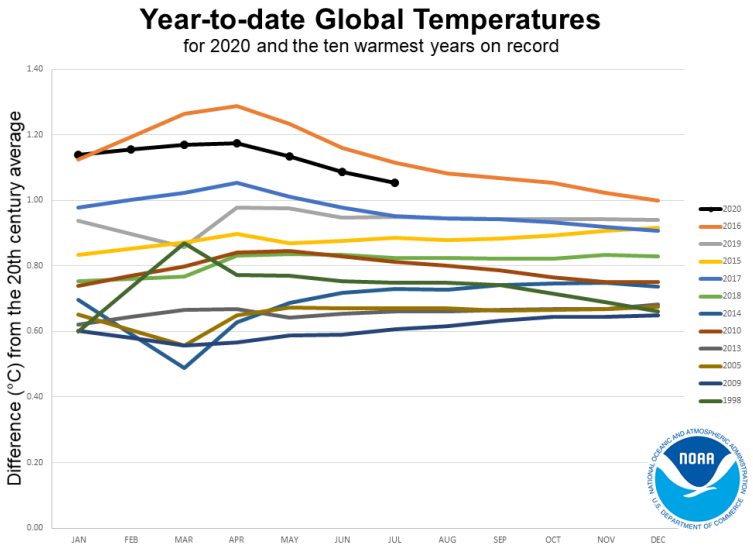


January-July 2020

2nd warmest Jan-Jul on record, behind 2016

- **Global Land & Ocean:** +1.05°C / +1.89°F
- **Global Land:** +1.73°C / +3.11°F
- **Global Ocean:** +0.79°C / +1.42°F



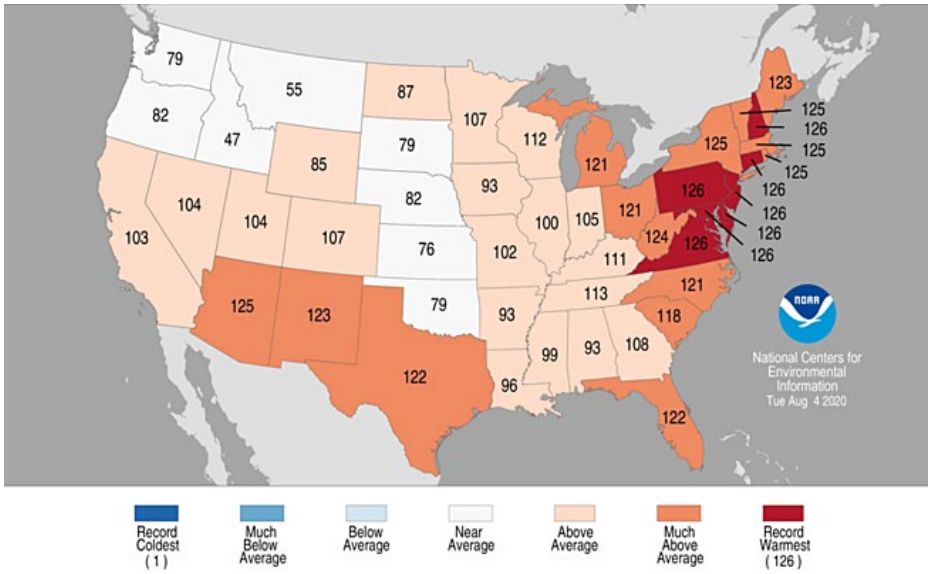
~37% chance of a warmest year
Virtually certain for a top-five year

Contiguous U.S. July 2020

Temperature: 75.7°F, +2.1°F, 11th warmest July on record

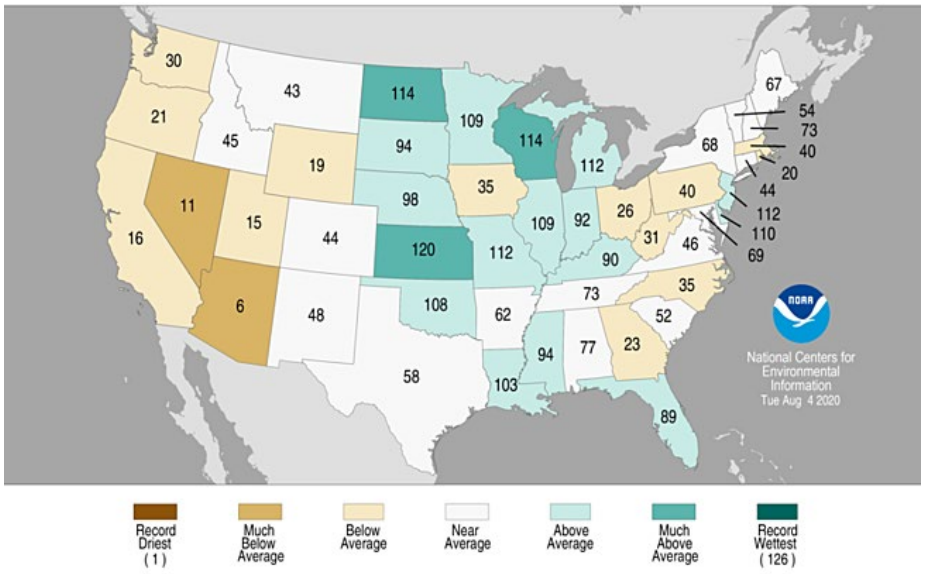
Precipitation: 2.93”, +0.15”, above average

Temperature Percentiles July 2020
Period: 1895-2020 (126 years)



- Above-average temperatures across part of West, Southwest, s Plains, c Rockies & from MS River Valley to East Coast
- MD, DE, NJ, NH, VA (tied),CT (tied) – warmest July
- Northeast Region – warmest July/month on record

Precipitation Percentiles July 2020
Period: 1895-2020 (126 years)



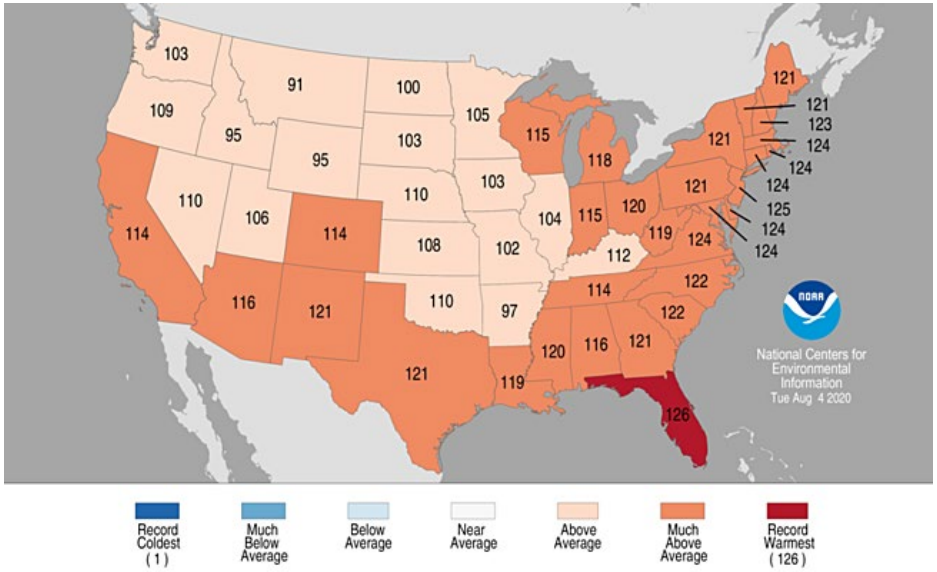
- Above-average precipitation across much of n & c Plains, Great Lakes, MS Valley, Gulf Coast
- KS – 7th wettest
- Drier-than-average conditions fell across much of the West, portions of the Deep South, c Plains, OH Valley & Southeast
- AZ – 6th driest, NV – 11th driest

Contiguous U.S. January-July 2020

Temperature: 53.6°F, +2.4°F, 7th warmest YTD on record

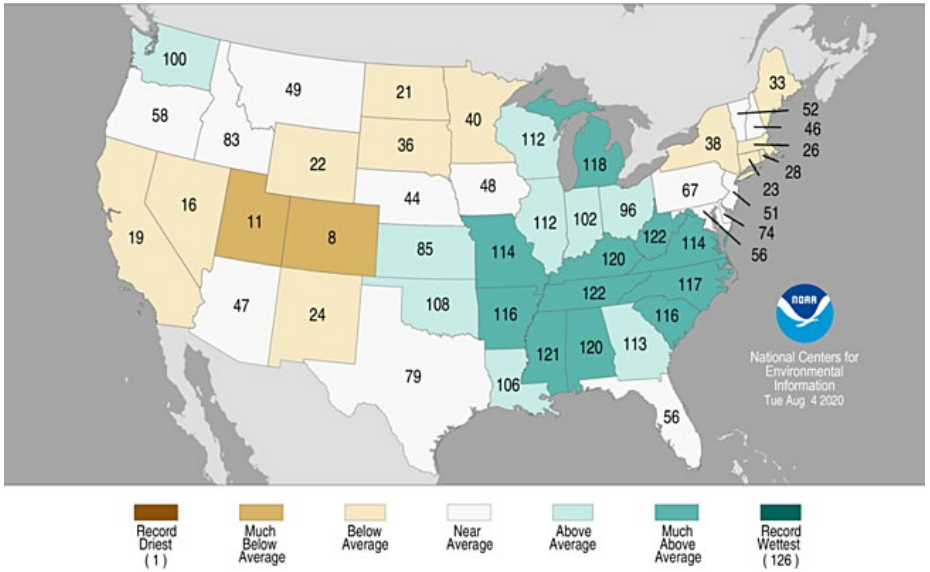
Precipitation: 19.29”, +1.20”, above average

Temperature Percentiles January-July 2020
Period: 1895-2020 (126 years)



- Above-average temperatures across the CONUS
- FL – warmest Jan-Jul on record
- Lots of near-record heat in Northeast
- Some near-average temperatures across portions of n Rockies and parts of the n Plains & South

Precipitation Percentiles January-July 2020
Period: 1895-2020 (126 years)



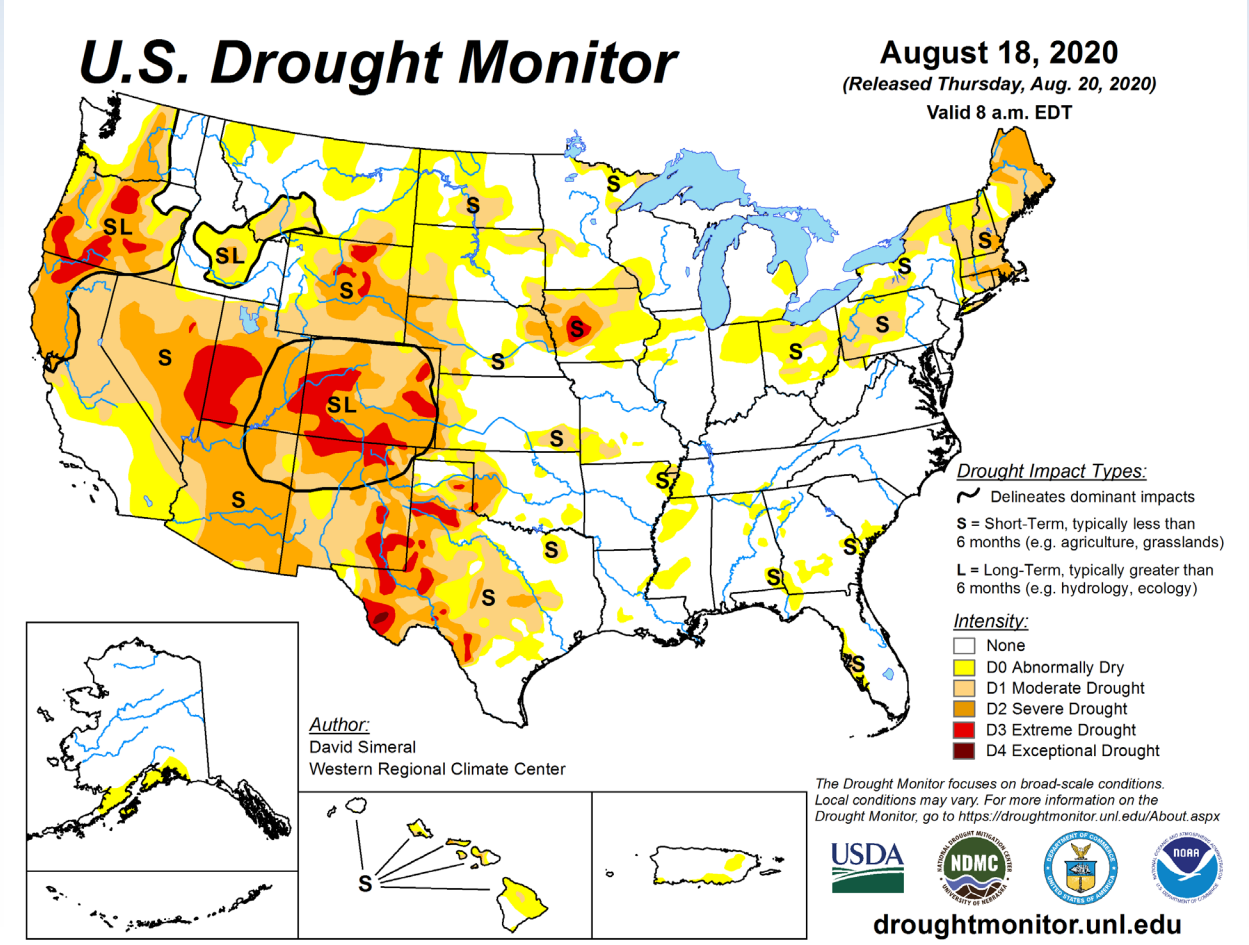
- Above-average precipitation across part of NW, c Plains, from Great Lakes to Gulf Coast and Southeast
- TN and WV – 5th wettest Jan-Jul
- Drier-than-average conditions stretched from West Coast to Rockies & n Plains, across Northeast
- CO – 8th driest UT – 11th driest

Current U.S. Drought

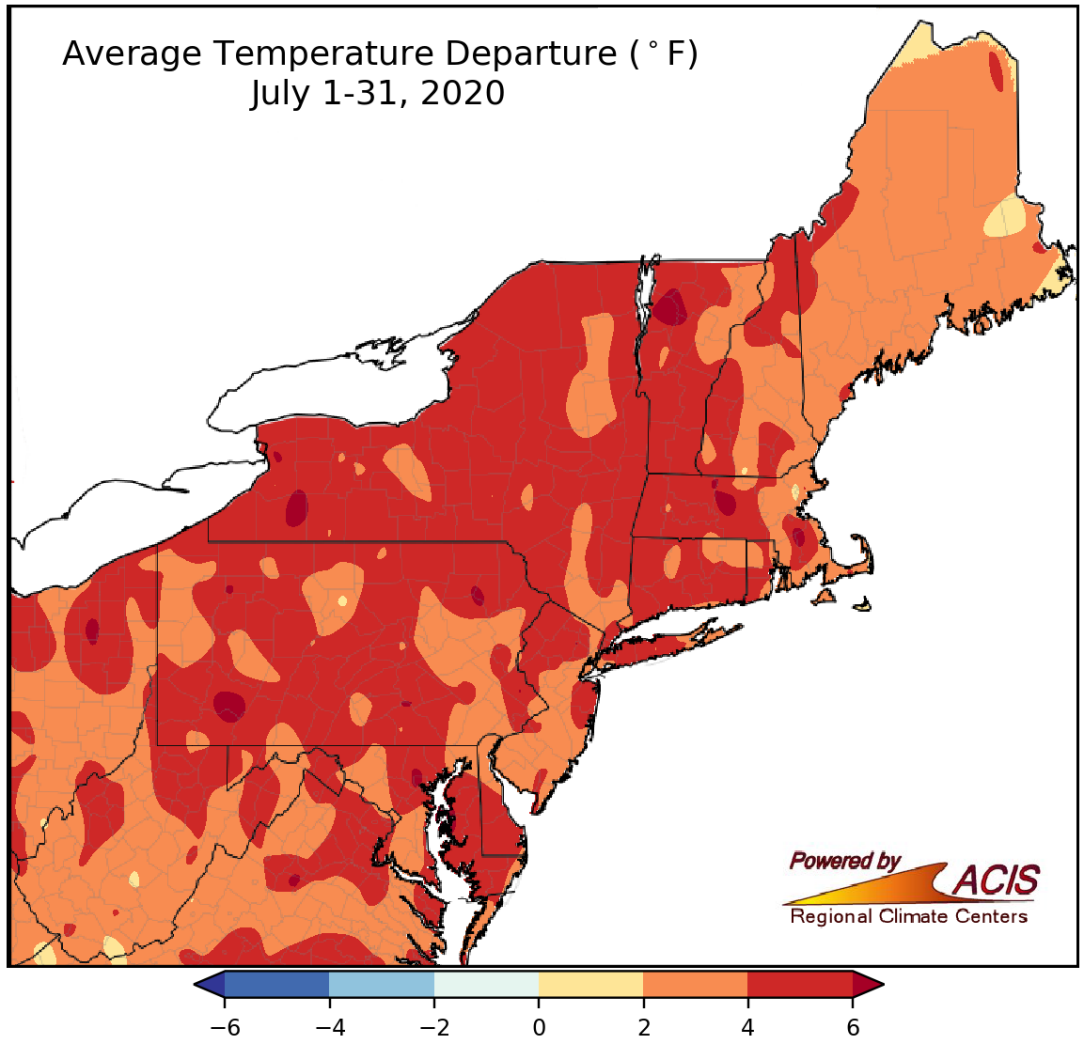
~37% of Contiguous U.S. in Drought

(↑ ~4 percentage points since late Jul)

- Improvement: Parts of the central Plains, Great Lakes
- Degradation: Portions of the West, Southwest, central Rockies, Texas, Iowa, New England
- Outside CONUS: Drought eliminated across Puerto Rico and contracted in parts of Hawaii. Alaska remains drought-free.



Northeast U.S. Heat



Above-normal July temperatures across the Northeast

Northeast U.S. Heat

Station	July 2020 Avg Temp (°F)	Normal (°F)	Departure (°F)	Rank for July (warmest)	Rank for All Months (warmest)
Portland, ME	73.7	69.1	4.6	1	1
Elkins, WV	74.4	70.0	4.4	1	1
Burlington, VT	76.8	70.6	6.2	1	1
Syracuse, NY	77.1	71.3	5.8	1	1
Buffalo, NY	77.6	71.1	6.5	1	1
Scranton, PA	78.0	71.4	6.6	1	1
Bridgeport, CT	78.7	74.3	4.4	1	1
Dulles Airport, VA	81.0	76.7	4.3	1	1
Harrisburg, PA	82.2	75.9	6.3	1	1
Baltimore, MD	82.6	77.0	5.6	1	1
LaGuardia Airport, NY	82.9	77.4	5.5	1	1
Caribou, ME	69.9	65.6	4.3	2	2
Worcester, MA	74.7	70.2	4.5	2	2
Erie, PA	76.5	71.7	4.8	2	2
Providence, RI	77.6	73.5	4.1	2	2
Hartford, CT	78.0	73.6	4.4	2	2
Atlantic City, NJ	80.1	76.2	3.9	2	2
Binghamton, NY	73.1	68.7	4.4	3	3
Concord, NH	74.5	70.0	4.5	3	3
Williamsport, PA	78.2	72.7	5.5	3	3
Philadelphia, PA	81.9	78.1	3.8	3	3
Washington National, DC	83.9	79.8	4.1	3	3
Beckley, WV	74.9	70.6	4.3	2	4
Allentown, PA	78.0	73.4	4.6	3	4
Kennedy Airport, NY	79.3	75.8	3.5	4	4
Rochester, NY	75.6	70.8	4.8	4	5
Islip, NY	77.7	73.9	3.8	5	5
Charleston, WV	79.6	75.4	4.2	4	5
Wilmington, DE	80.0	76.8	3.2	5	5
Huntington, WV	80.2	75.7	4.5	6	6
Newark, NJ	80.8	77.4	3.4	6	6
Albany, NY	75.9	71.8	4.1	7	7
Central Park, NY	80.0	76.5	3.5	7	8
Pittsburgh, PA	77.3	72.6	4.7	8	10
Boston, MA	75.3	73.4	1.9	19	

July was the all-time hottest month on record for 11 long-term climate sites (**yellow**)

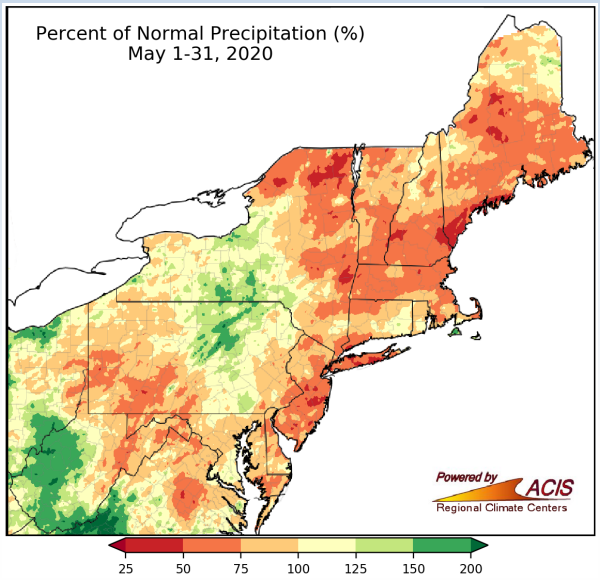
Station	Number of Days with a Max Temp >= 90°F in July 2020	Average Number of Days with a Max Temp >= 90°F in July	Departure	Rank for July (greatest)	Rank for All Months (greatest)
Baltimore, MD	25	12	13	1	1
Hartford, CT	20	7	13	1	1
LaGuardia Airport, NY	19	8	11	1	1
Philadelphia, PA	21	11	10	1	1
Providence, RI	13	5	8	1	1
Scranton, PA	16	4	12	1	1
Washington National, DC	28	14	14	1	1
Dulles Airport, VA	23	12	11	2	2
Harrisburg, PA	22	9	13	2	2
Williamsport, PA	19	6	13	2	2
Atlantic City, NJ	16	9	7	4	4
Newark, NJ	17	10	7	4	4
Buffalo, NY	8	2	6	2	5
Burlington, VT	9	3	6	4	6
Kennedy Airport, NY	10	5	5	6	6
Syracuse, NY	10	4	6	4	6
Allentown, PA	15	7	8	6	7
Central Park, NY	14	7	7	6	7
Elkins, WV	8	2	6	4	7
Huntington, WV	22	9	13	6	7
Bridgeport, CT	8	4	4	8	9
Portland, ME	5	2	3	4	9
Charleston, WV	21	8	13	9	10
Wilmington, DE	16	9	7	8	10
Concord, NH	10	4	6	9	11
Islip, NY	6	3	3	9	12
Pittsburgh, PA	12	4	8	8	12
Rochester, NY	8	3	5	15	20
Albany, NY	7	4	3		
Beckley, WV	2	1	1		
Binghamton, NY	2	1	1	12	
Boston, MA	7	6	1		
Caribou, ME	1	1	0		
Erie, PA	4	2	2	15	
Worcester, MA	2	2	0		

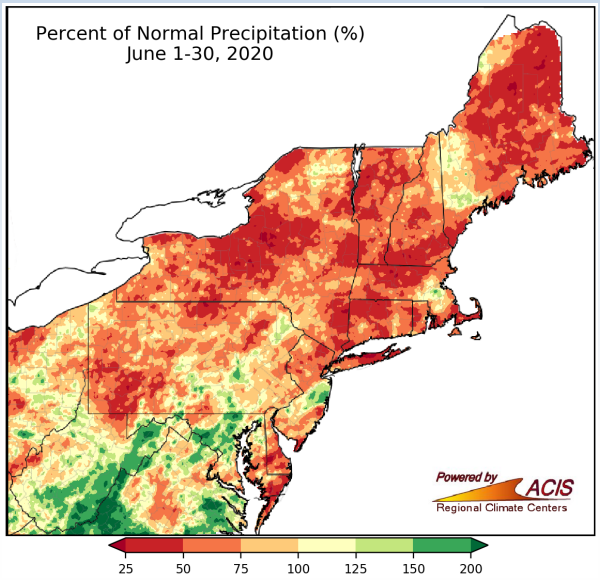
*average based on 1981-2010

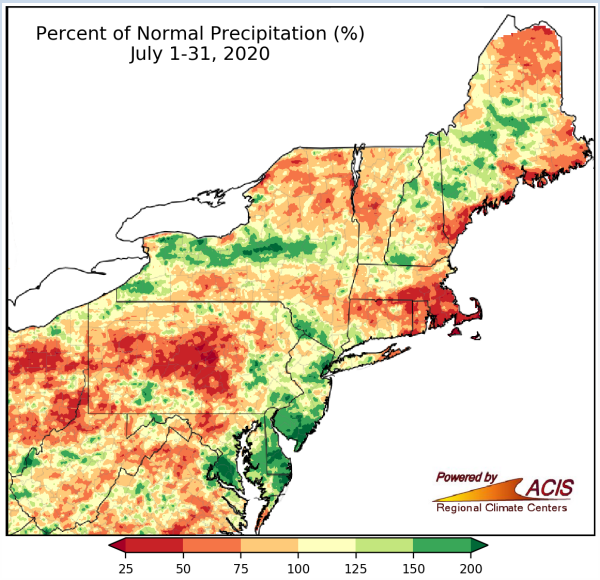
**most ranks tied with several years

Seven long-term climate sites (**yellow**) had their greatest number of days with a high of at least 90°F of any month on record

Northeast U.S. Drought



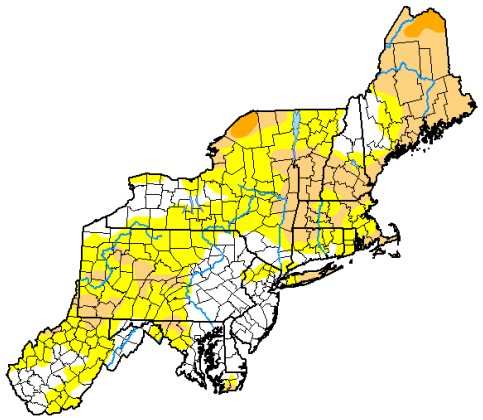




Below-normal precipitation in parts of New York and New England

Drought development in the Northeast

U.S. Drought Monitor
Northeast



July 28, 2020
(Released Thursday, Jul. 30, 2020)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	28.92	71.08	28.65	1.71	0.00	0.00
Last Week 07-21-2020	30.12	69.88	25.98	1.71	0.00	0.00
3 Months Ago 04-28-2020	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	99.61	0.39	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	48.74	51.26	8.49	2.23	0.00	0.00
One Year Ago 07-30-2019	100.00	0.00	0.00	0.00	0.00	0.00

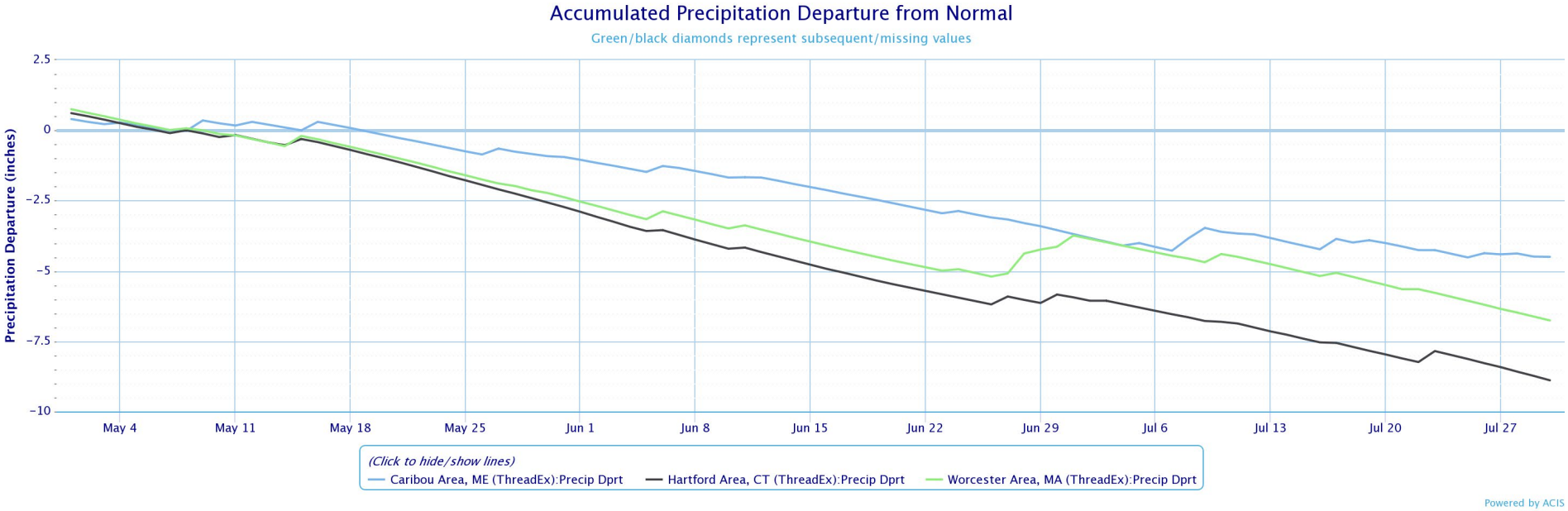
Intensity:
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Richard Heim
NCEI/NOAA

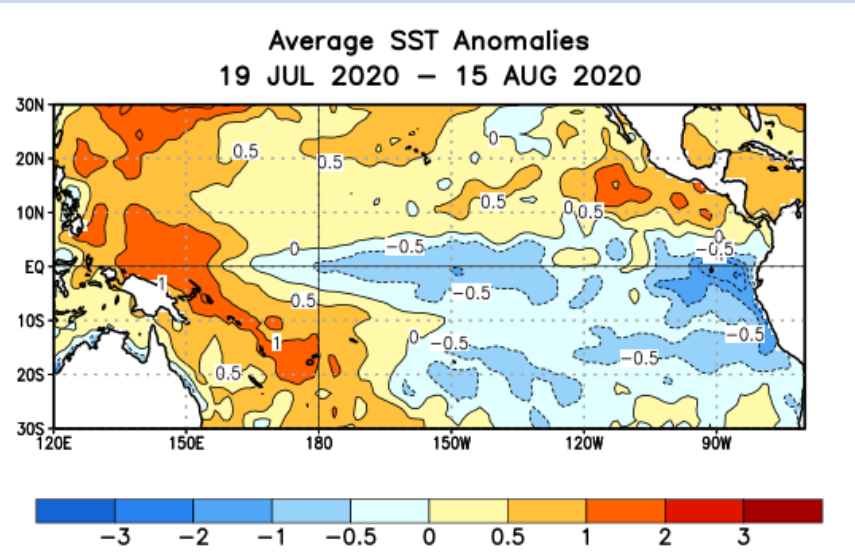
droughtmonitor.unl.edu

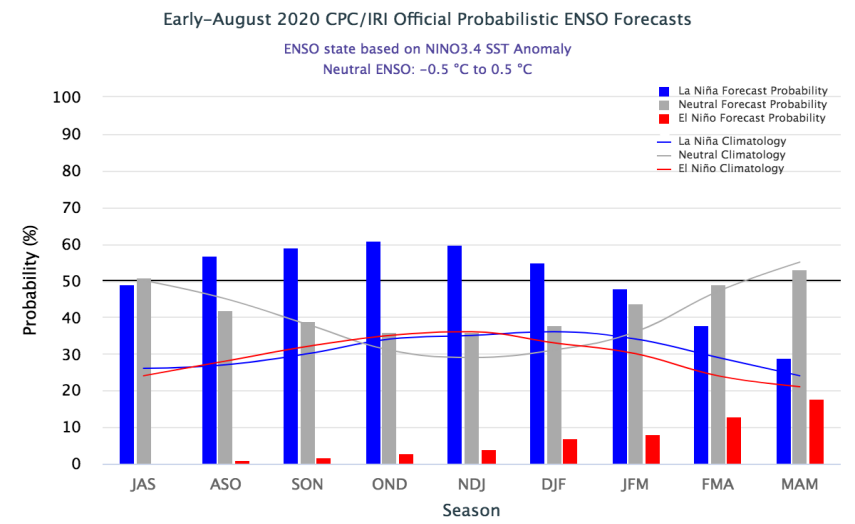
Northeast U.S. Drought



Some areas had precipitation deficits of 4 to 9 inches from May 1 to July 31

Sea Surface Temperatures & ENSO



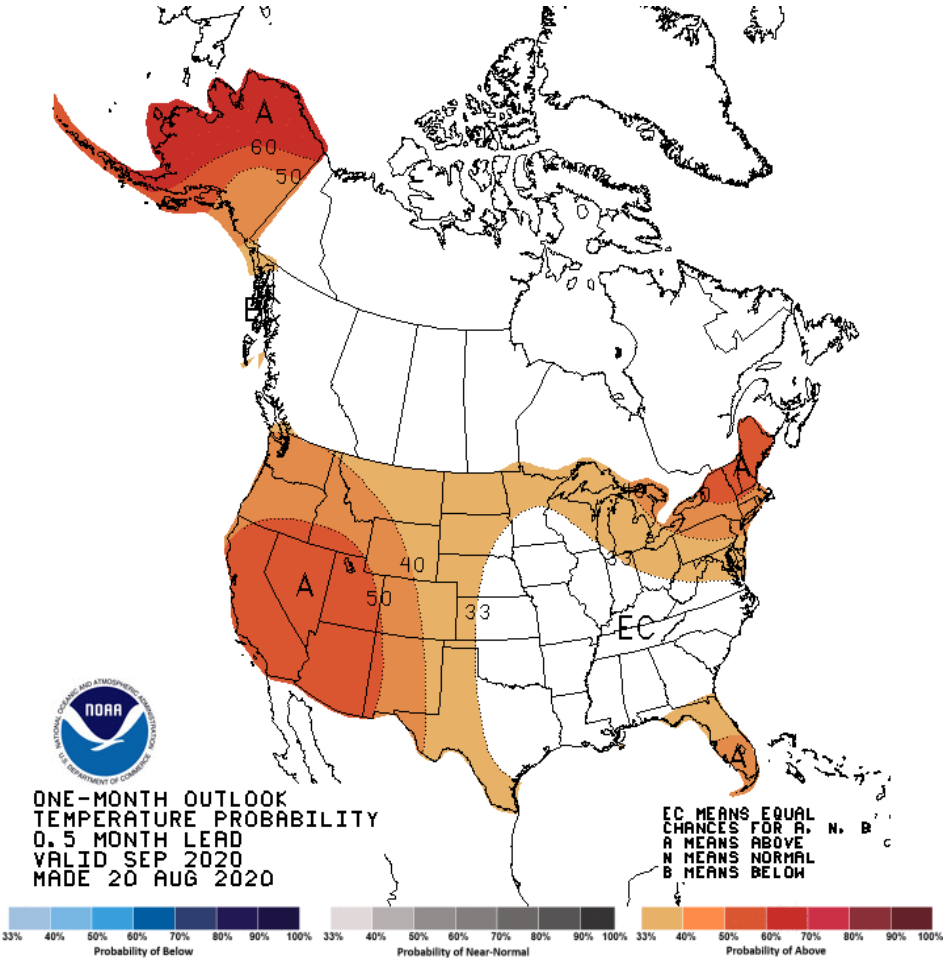


- Sea surface temperatures
  - Below normal SSTs continue across the equatorial Pacific; equatorial SSTs have cooled recently in the central Pacific
  - The oceanic and atmospheric observations currently reflect ENSO neutral conditions
  - Positive SST anomalies are present in the Gulf of Mexico and Caribbean Sea

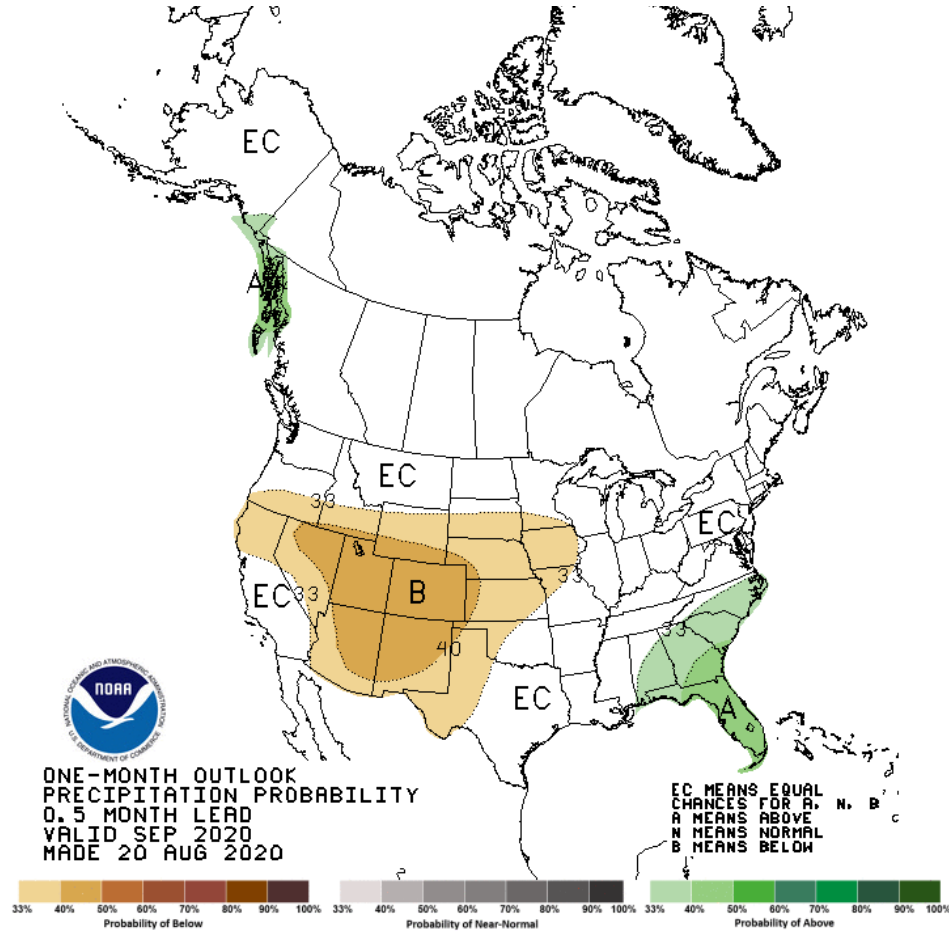
- ENSO forecast
  - La Nina watch in effect
  - La Nina likely to develop during autumn (60% chance).
  - La Nina likely to continue through winter 2020-21 (55% chance)

Monthly Forecast (Sep.)

September Average Temperature Probability

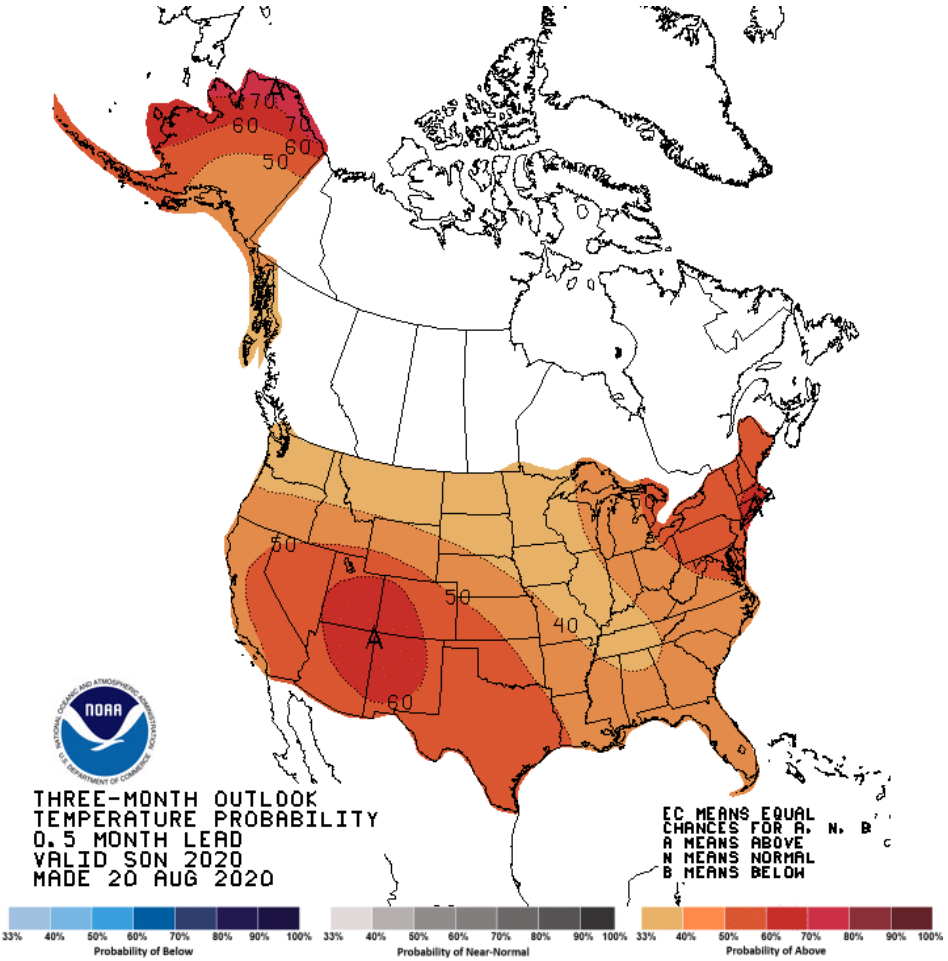


September Total Precipitation Probability

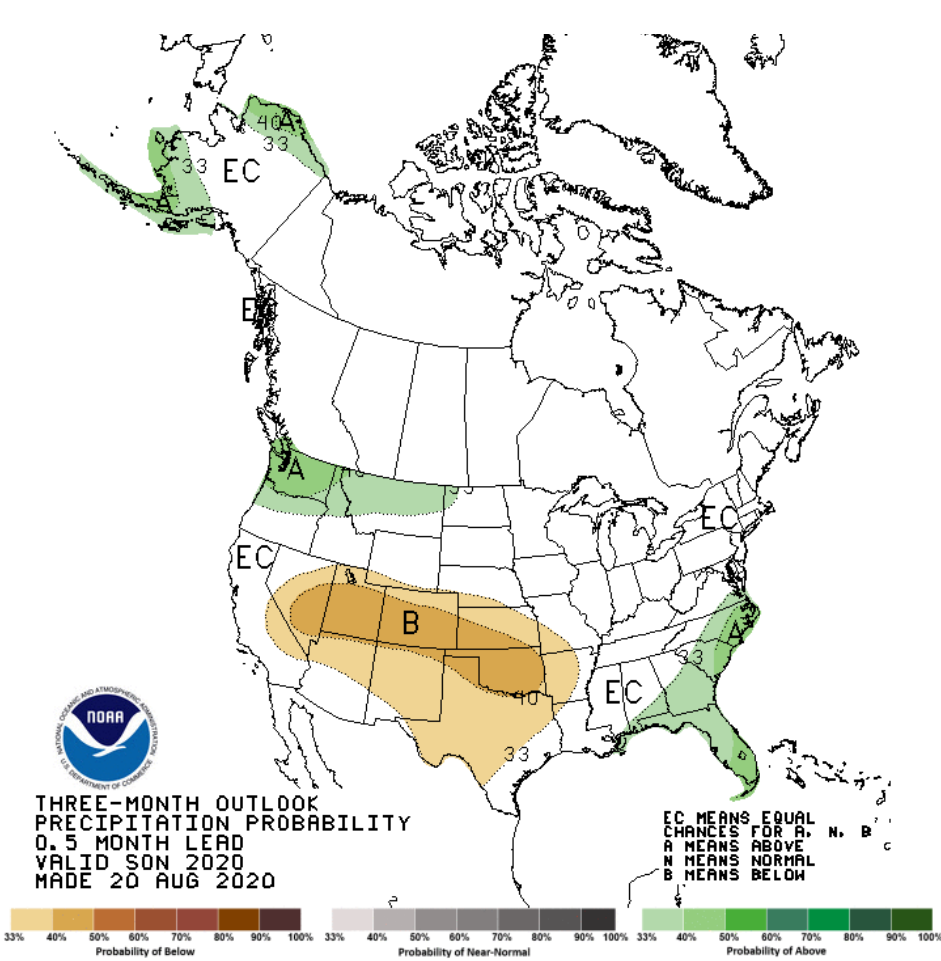


Seasonal Forecast (Sep.-Oct.-Nov.)

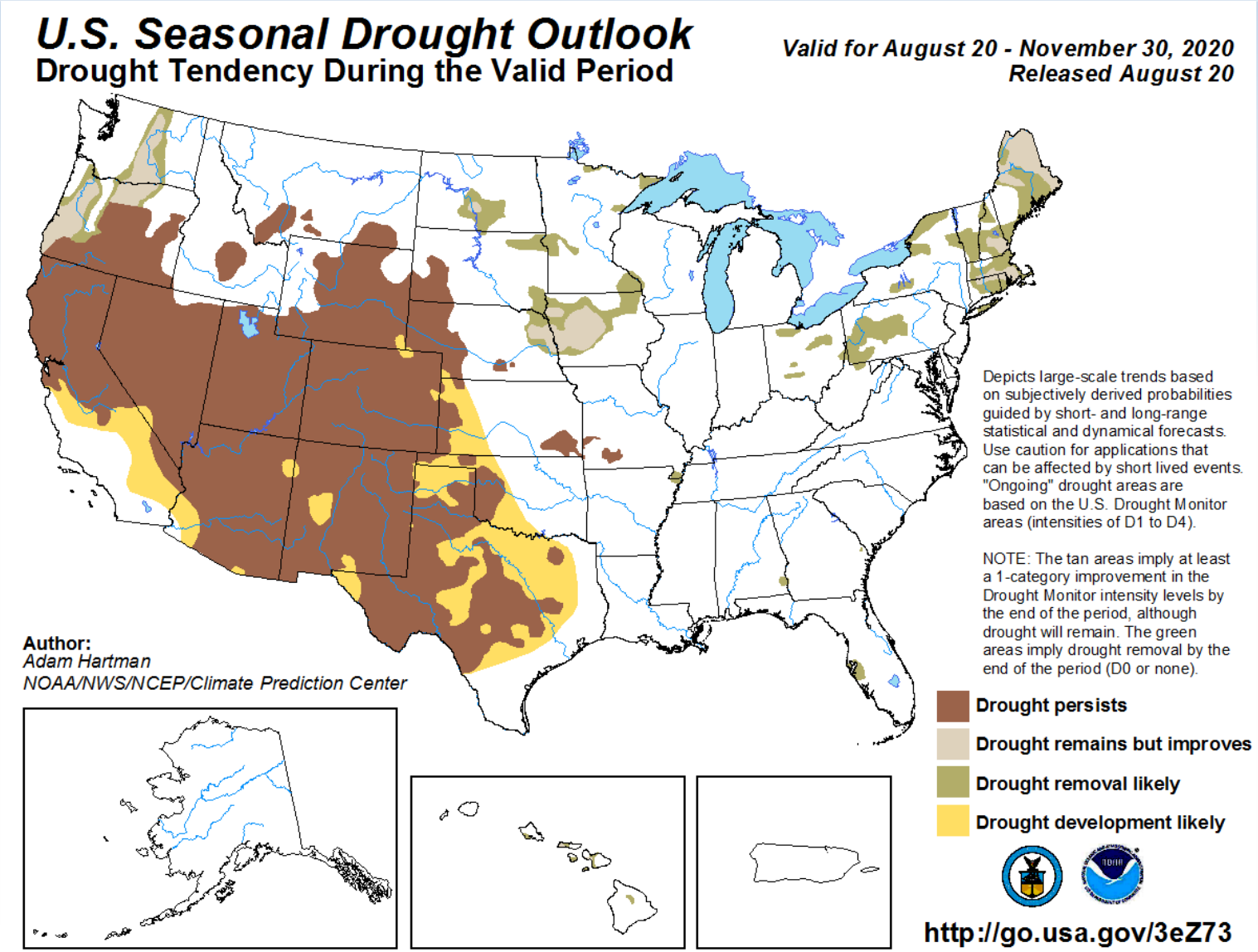
Sep-Oct-Nov Average Temperature Probability



Sep-Oct-Nov Total Precipitation Probability



U.S. Drought Outlook



For More Information

TODAY'S PRESENTATION:

- http://www.ncdc.noaa.gov/sotc/briefings

NOAA's National Centers for Environmental Information: www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- Dates for upcoming reports: http://www.ncdc.noaa.gov/monitoring-references/dyk/monthly-releases

NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov

Northeast Regional Climate Center: http://www.nrcc.cornell.edu/

U.S. Drought Monitor: www.drought.gov

Climate Portal: www.climate.gov

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